DOCUMENT RESUME

ED 457 487 CG 031 268

AUTHOR Stellwagen, Kurt
TITLE Projecting School Psychology Staffing Needs Using a Risk-Adjusted Model.
PUB DATE 2001-08-24
NOTE 13p.; Paper presented at the Annual Conference of the American Psychological Association (109th, San Francisco, CA, August 24-28, 2001).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Ancillary School Services; At Risk Persons; Bilingual Students; Economically Disadvantaged; Elementary Secondary Education; *Faculty Workload; *High Risk Students; Learning Disabilities; Limited English Speaking; Models; Needs Assessment; *School Counseling; *School Psychologists
IDENTIFIERS National Association of School Psychologists

ABSTRACT

A model is proposed to project optimal school psychology service ratios based upon the percentages of at risk students enrolled within a given school population. Using the standard 1:1,000 service ratio advocated by The National Association of School Psychologists (NASP) as a starting point, ratios are then adjusted based upon the size of three high risk groups (students with limited English proficiency, students eligible for free or reduced lunches, and students classified as educationally exceptional). If the percentage of students belonging to one or more of these groups exceeds the target figure(s), then staffing projections are increased for each risk factor present. Comparing the proposed model to actual staffing practices across the nation, eight states were found to have one or more risk groups above criteria. The mean staffing ratio of these eight states (1:2,459) was higher than the mean ratio of the states that lacked elevated concentrations of at-risk students (1:2,020). Therefore, when the analysis was conducted at the state level, it did not appear as if elevated percentages resulted in lower staffing ratios for school psychologists. Results are discussed in terms of the dependent relationship that exists between staffing ratios and school psychology service delivery models. (Contains 23 references.) (Author/JDM)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 457 487

Projecting School Psychology Staffing Needs Using a Risk-Adjusted Model

Kurt Stellwagen
The University of North Carolina at Chapel Hill

August 24, 2001

BEST COPY AVAILABLE

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☐ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
K. Stellwagen
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

CG031268

Abstract

A model is proposed to project optimal school psychology service ratios based upon the percentages of at-risk students enrolled within a given school population. Using the standard 1: 1,000 service ratio advocated for by The National Association of School Psychologists (NASP) as a starting point, ratios are then adjusted based upon the size of three high-risk groups (students with limited English proficiency, students eligible for free or reduced lunches, and students classified as educationally exceptional). If the percentage of students belonging to one or more of these groups exceeds the target figure(s), then staffing projections are increased for each risk factor present. Comparing the proposed model to actual staffing practices across the nation, eight states were found to have one or more risk groups above criteria. The mean staffing ratio of these eight states (1: 2,459) was higher than the mean ratio of the states that lacked elevated concentrations of at-risk students (1: 2,020). Therefore when the analysis was conducted at the state level, it did not appear as if elevated percentages of at-risk student populations (as defined by the current model) resulted in lower staffing ratios for school psychologists. Results are discussed in terms of the dependent relationship that exists between staffing ratios and school psychology service delivery models.

The Rationale for a Risk-Adjusted Model for Projecting School Psychology Staffing Needs

There is a strong positive relationship between lower service ratios and the provision of more comprehensive psychological services by practitioners (Goldwasser, Meyers, Christienson & Graden, 1983; Lund, Reschly & Connolly Martin, 1998, Smith, 1984). For example, Goldwasser and coauthors noted that psychologist to student service ratios ranging from 1: 400 to 1: 1,000 (the most favorable ratios reported at the time) were "necessary" if psychologists hoped to spend a significant amount of time providing prevention, general consultation, and direct intervention services. Conversely, psychologists with ratios above 1: 1,000 were found to spend the majority of their time conducting assessments and serving on IEP teams. Fortunately, there has been a historic trend for the service ratios of school psychologists to consistently "improve" in the direction of psychologists being responsible for lesser numbers of students. For example, in 1950 the median service ratio for school psychologists was 1: 18,5000 (Fagan & Schicke, 1994), while more contemporary surveys (Curtis, Hunley, Walker & Baker, 1999; Thomas, 1999) have indicated a median service ratio of approximately 1: 1,500. Currently, in 24 states at least 10% of school psychologists practice with service ratios of 1: 500 or less (Thomas, 1999). Given these findings in practice, it appears that schools or school systems that wish school psychologists to provide comprehensive, state-of-the-art psychological services should attempt to employ enough school psychologists to provide for a low service ratio (i.e., at most one psychologist per 1,000 students and ideally one psychologist per 400-500 students). However, it is recognized that while a 1: 400 to 1:500 ratio may represent an "ideal," it is an ideal that will only be feasible in a minority of school districts. Therefore, as a more practical goal for the majority of districts interested in providing comprehensive psychological services, the proposed model prioritizes reducing the service ratios carried by school psychologists who work with those students most at risk for psychosocial and academic failure.

As outlined below, using this model, school psychologists practicing in school settings that lack specified high-risk populations would carry a 1: 1,000 service ratio[1], while psychologists who practice in settings with significant percentages of at-risk students would have their service ratios lowered in incremental steps. The rationale for this model is that school psychologists who work in settings with large numbers of high-risk students will require lower service ratios to sufficiently impact student populations where a greater than average number of students have academic and/or social-emotional difficulties. Currently, it is common practice for school psychologist staff assignments to be guided by an "equity" principal in which each school receives an equal amount of professional staff time regardless of even the school's enrollment. It is a fundamental principal of the proposed model that this commonly employed attempt at "equity," is actually both inequitable and inefficient.

The proposed model of risk-adjusted ratio reductions for school psychology staff is quite similar to the method of determining school-based staffing ratios for social workers advocated by the National Association of Social Workers (1992)[2]. Students with limited English proficiency and students on free and reduced lunch were included in the model based upon long-standing research findings that unambiguously implicate a host of negative academic and social-emotional outcomes with both poverty (Bernstein, 1992; Brookes-Gunn, Klebanov, Liaw, & Duncan, 1995; McLoyd, 1990; Patterson, Kupersmidt, & Vaden, 1990; Spencer, Dobbs & Phillips, 1988, Sameroff & Seifer, 1983; Sameroff, Seifer, Baldwin, & Baldwin, 1993) and Limited English Proficiency status (U. S. Department of Education, 1993; Ortiz, 1987; Ruiz, 1989; Rivera & Simich, 1981; Russell & Ortiz, 1988; Schiff-Myers, Djukic, McGovern-Lawler, & Perez, 1993). In the case of students classified as Exceptional Children, some form of academic and/or social emotional difficulty will have predated program eligibility.

---

[1] The current standard endorsed by the country's largest group of practicing school psychologist (The National Association of School Psychologists, 2000).

[2] NASW standards advocate reducing school-based staffing ratios based upon the presence of "concentrations" (an undefined term) of students in the following four categories: poverty, Exceptional Children (EC), minority status, students with "federal impact issues." The suggested service ratios range

The Model for Projecting Risk-Adjusted School Psychology Staffing Needs

The proposed model recommends using the current NASP standard staffing ratio (1: 1,000) as a starting point, and than applying incremental reductions of the base rate for each of the three risk factors used in the model. National population averages can be used as criteria for targeted student populations, so that head counts 50% or more above national averages trigger 20% decreases in school psychology staffing ratios. Using this model, a psychologist working in a school with one significant student risk factor would carry a service ratio of 1: 800, a psychologist working in a school with two significant risk factors would have a 1: 600 ratio, while the presence of three risk factors would result in a 1: 400 ratio. Although it would appear more logically consistent for 20% decreases in staffing ratios to depend on 20% increases in student risk populations (rather than 50% increases), the proposed model prioritizes directing scarce staff resources to those student populations most clearly in need.

Poverty/Free or Reduced Lunch. Under authorization for Title I services (U. S. House of Representatives, 1994) schools use "free or reduced lunch status" as their index of poverty. Using data supplied by the U. S. Department of Education (2000), the national average of students receiving aid is estimated to be 37.7%[3]. Using the 50% above national average criterion, any state, school system, or individual school with 56.6% or more of their students receiving free or reduced lunches would receive a staffing ratio reduction.

Limited English Proficiency. Nationwide, the Limited English Proficiency (LEP) school enrollment percentage is approximately 7.4%[4] (Macias, 2000). Thus, using the 50% above national average criterion, any state, school system, or individual school with 11.1% or more LEP students would demonstrate the need for additional staffing.

Exceptional Children. According to the U. S. Department of Education (2000), nationwide 12.4% of students receive services as Exceptional Children (EC). Applying the 50% above national average criterion to this figure, any state, school system, or

---

from 1: 2,000 for social workers in settings with no high-risk concentrations, to 1: 350 for social workers employed in school settings with concentrations of all four student groups.

[3] The calculated national average is approximate because data was not provided by the following four states: Arizona, Illinois, Tennessee, Washington.

[4] Using data from the 1996-1997 school year for 47 reporting states (Pennsylvania, Virginia, and West Virginia did not provide data).

individual school with 18.6% or more of their students classified as EC would be given a staffing ratio reduction.

Applying the Proposed Model at the State Level

To apply the proposed model at the state level, one simply calculates the statewide percentage of students belonging to the three specified high-risk groups, compares these percentages to the target criteria figures, and then determines the "optimal" statewide school psychology staffing ratio. However, it should be noted that statewide adjusted ratios will always be approximate estimates, because they represent averages that do not take into account high-risk concentrations that occur at the local level. For example based upon data supplied by U. S. Department of Education (2000), in California the average percentage of students on free and reduced lunch is 47.1%; while in the state's largest district (Los Angeles Unified) the percentage of student's receiving aid is 71.1%. Because of this discrepancy, the statewide average, which is well short of the 56.6% target criteria, does not provide a fully comprehensive "snapshot" of child poverty in California. Therefore, analyses conducted at the district level will always be more accurate than analyses conducted at the state level, just as analyses conducted at the individual school level will always be more accurate than analyses conducted at the district level. With this caveat in mind, a state-by-state comparison provides a rough illustration of how some of the more dramatic differences in student demographics in various regions of the country would differentially impact the recommended staffing ratios that are generated by the proposed model.

Using current data from all 50 states and the District of Columbia (U. S. Department of Education, 2000), Table 1 presents current staffing ratios, the percentages of student's belonging to the specified high-risk groups in each state for which data is available, the recommended ratios that result when the model is applied, and the discrepancies that result when current ratios are compared to recommended ratios.

(Insert Table 1 Here)

As can be seen above, one state (New Mexico) has two high-risk groups that exceed criteria, and seven states (Alaska, Arizona, California, Florida, Texas,

Louisiana, Mississippi) have one risk group exceeding criteria. The mean current staffing ratio of the eight states with at-risk elevations (1: 2,459), is 439 students higher than the mean ratio of the states that lack elevated risk concentrations (1: 2,020). Based upon this information, it does not appear as if elevated percentages of at-risk student populations (as defined by the current model) result in lower staff ratios for school psychologists when the analysis is conducted at the state level. Only three states, all in the northeast, (New York, New Jersey and Connecticut) have mean staffing ratios that are lower than the adjusted ratios recommended by the current model. In the remaining states, the discrepancies between current staffing ratios and recommended ratios range from 2 to 7242. Using the proposed model, the mean staffing ratio discrepancy nationwide is 1124, which is marginally higher than the discrepancy (1052) between the NASP standard staffing ratio (1: 1,000) and the current nationwide mean ratio (1: 2,052).

Discussion

In the majority of states, staffing ratios are significantly higher than both the current NASP standard and the adjusted ratios recommended by the proposed model. Concern about the size of these large staffing ratios is difficult to rouse, compared to the alarm created by relatively small changes in the student-to-staff ratios for teachers. How then, can an effective argument be made? School psychologists must communicate the value of their services as interventionists, before the public at large, and therefore politicians, become concerned about improving the general state of psychological services in the schools. While this is important in almost all areas of the country, school psychologists who practice in settings with concentrations of at-risk populations have a further justification for requesting staffing ratio reductions. Although some might argue that given current shortages of school psychology staff in many regions of the country, it makes little sense to advocate for creating additional staff positions when said positions may go unfilled. However, this is a passive position that fails to account for the need to generate heightened concern about professional shortages before the infrastructure for creating school psychologists (university programs) will be expanded, and before more undergraduate students will understand

that this is an opportune time to become a school psychologist. Such a scenario is very similar to what is currently occurring in teaching, where calls to reduce classroom sizes are being made simultaneously as schools are struggling to fill their present positions. This conflict has resulted in increasing publicity regarding the need to train and hire more teachers, a positive trend that school psychologists need to generate for their own profession.

By virtue of their training, school psychologists are in a unique position to assist students who are struggling due to academic and/or social-emotional difficulties. Although the assessment role has value, psychologists can often make their greatest impact when they engage in consultative services and direct interventions. However, large staffing ratios will make conducting these types of activities virtually impossible, as psychologists will be required to devote all their professional time to keeping up with their assessment caseload. Students deserve schools that provide comprehensive psychological services, and until these services are provided on a more widespread basis, much of the current educational rhetoric (e.g. "leave no child behind") will remain empty sloganeering.

References

Bernstein, L. (1992). Where is reform taking place? An analysis of policy changes and school climate. *Educational Evaluation and Policy Analysis, 14(3),* 297-302.

Brooks-Gunn, J., Klebanov, P., Liaw, F., & Duncan, G. (1995). Toward an understanding of the effects of poverty on children. In H. Fitzgerald, B. Lester, & B. Zuckerman, (Eds.), *Children of poverty: Research, health and policy issues* (pp. 3-36). New York: Garland

Curtis, M. J., Hunley, S. A., Walker, K. J., & Baker, A. C. (1999). Demographic characteristics and professional practice in school psychology. *School Psychology Review, 28(1),* 104-116

Fagan, T., & Schicke, M. (1994). The service ratio in large school districts: Historical and contemporary perspectives. *Journal of School Psychology, 32, (3), 305-312*

Goldwasser, E, Meyers, J., Christenson, S., Graden, J. (1983). The impact of PL 94-142 on the practice of school psychology: A national survey. *Psychology in the Schools, 20,* 153-165

Lund, A. R., Reschly, D. J., & Connolly Martin, L. M. (1998). School psychology personnel needs: Correlates of current patterns and historical trends. *School Psychology Review, 27,* 106-120.

Marcias, R. F. (1998). Summary report of the survey of the states' limited English proficient students and available educational programs and services, 1996-97. In the *National Clearinghouse for Bilingual Education [*On-Line]. Available: *http://www.ncbe.gwe.edu.*

McLoyd, V. (1990). The impact of economic hardship on black families and children: Psychological distress, parenting and socioemotional development. *Child Development, 61,* 311-346

Ortiz, A. A. (1987). Communication disorders among limited English proficient Hispanic students. *Bilingual Special Education Newsletter, 5,* 1-3

National Association of School Psychologists (NASP). (2000). *Standards for the provision of school psychological services* [On-line]. Available: http://www.naspweb.org/services/certification/stand.html.

National Association of Social Workers (NASW). (1992). *NASW Standards for School Social Work Services* [On-line]. Available: http://www.naswdc.org/prac/standards/school.html.

Patterson, C. J.., Kupersmidt, J. B., Vaden, N. A. (1990). Income level, gender, ethnicity, and household compostion as predictors of children's school-based competence. *Child Development, 1990, 61(2), 485-494*

Rivera, C., & Simich, C. (1981). Issues in the assessment of language proficiency of language minority students. *NABE: The Journal of the National Association for Bilingual Education, 6(1),* 19-39

Ruiz, N. T. (1989). An optimal learning environment for Rosemary. *Exceptional Children, 56(2),* 130-144

Russel, N. L., & Ortiz, A. A. (1989). Assessment and instruction within a dialoge model of communication: Part II. *Bilingual Special Education Newsletter, 8,* 1-6

Sameroff, A. J. & Seifer, R. (1983). Familial risk and child competence. *Child Development, 54,* 1254-1268

Sameroff, A. J., Seifer, R., Baldwin, A., & Baldwin, C. (1993). Stabilty of intelligence from preschool to adolescence: The influence of social and family risk factors. *Child Development, 64,* 80-97

Schiff-Meyers, N. B., Djukic, J., McGovern-Lawler, J., & Perez, D. (1993). Assessment consideration in the evaluation of second-language learners: A case study. *Exceptional Children, 60(3),* 237-248

Smith, D. (1984). Practicing school psychologists: Their characteristics, activities and populations served. *Professional Psychology: Research and Practice, 15,* 798-810.

Spencer, Dobbs, & Phillips. (1988). African-American adolescents: Adaptational processes and socioeconomic diversity in behavioral outcomes. *Journal of Adolescence, 11,* 117—137.

Thomas, A. (1999). School Psychology 2000. *NASP Communique, 28(2),* p. 28

U. S. Department of Education, National Center for Educational Statistics. (2000). [On-Line]. Available: http://www.nces.ed.gov/pubs2001/2001339.pdf.

U.S. House of Representatives. (1994). *Improving America's Schools Act: Conference Report to Accompany H. R. 6 (Report No.103-761).* Washington, DC: U. S. Government Printing Office.

Table 1

Applying the Model in Individual States

State	% with IEP's (18.6% Criterion)	% Receiving LEP Services (11.1% Criterion)	% Eligible for Free or Reduced Lunch (56.6% Criterion)	Current Mean School Psychology Staffing Ratio (Thomas, 1999)	Staffing Ratio Discrepancy (Recommended Ratio-Current Ratio)
States with Two High-Risk Groups Exceeding Criteria (Recommended Ratio 1: 600)					
New Mexico	**18.7**	**23.9**	50.9	951	-351
States with One High-Risk Group Exceeding Criteria (Recommended Ratio 1: 800)					
Alaska	13.0	**26.9**	25.7	3384	-2584
Arizona	10.6	**11.5**	Not Reported	2014	-1214
California	10.8	**22.2**	47.1	2480	-1680
Florida	14.9	**12.2**	44.3	2407	-1607
Texas	12.1	**12.7**	44.7	2320	-1520
Louisiana	12.6	1.2	**58.5**	2611	-1811
Mississippi	12.4	0.6	**63.3**	3505	-2705
States with No High-Risk Groups Exceeding Criteria (Recommended Ratio 1: 1,000)					
Alabama	13.5	0.8	45.0	3384	-2384
Arkansas	11.9	1.6	45.4	2660	-1660
Colorado	10.2	7.4	27.7	1518	-518
Connecticut	13.5	3.3	23.0	844	+156
Delaware	14.1	1.5	32.9	1283	-283
D. C.	12.8	5.4	54.2	3206	-2206
Georgia	10.9	1.0	42.9	2655	-1655
Hawaii	11.4	5.7	39.0	8252	-7252
Idaho	11.8	5.7	32.3	1666	-666
Illinois	13.9	5.2	Not Reported	1531	-531
Indiana	15.2	0.9	27.7	2287	-1287
Iowa	14.2	1.4	26.5	1500	-500
Kansas	12.7	2.7	32.2	1166	-166
Kentucky	14.1	0.5	47.6	2129	-1129
Maine	14.7	1.1	29.9	1355	-355
Maryland	13.1	1.8	29.7	1871	-871
Massachusetts	16.6	4.2	24.6	1002	-2
Michigan	Undercounted	1.6	30.5	1755	-755
Minnesota	12.5	3.1	25.7	1499	-499
Missouri	14.7	0.7	34.2	2373	-1373
Montana	12.0	5.1	30.9	1929	-929
Nebraska	15.1	1.9	29.8	1522	-522

State	IEP%	LEP%	Free Lunch	Current Ratio	Discrepancy
Nevada	11.0	9.5	27.5	2249	-1249
New Hampshire	13.5	0.8	15.9	1223	-223
New Jersey	Undercounted	3.4	28.3	995	+5
New York	14.5	7.5	41.7	817	+183
North Carolina	13.5	1.9	39.0	1936	-936
North Dakota	11.9	5.9	28.7	2728	-1728
Ohio	12.2	0.6	26.6	1824	-824
Oklahoma	13.2	5.1	45.5	2558	-1558
Oregon	11.3	5.8	34.1	1733	-733
Pennsylvania	11.9	Not Reported	28.7	2327	-1327
Rhode Island	18.5	5.9	32.9	1330	-330
South Carolina	13.7	0.5	46.1	2022	-1022
South Dakota	12.2	7.6	28.2	3107	-2107
Tennessee	14.8	0.7	Not Reported	2389	-1389
Utah	11.6	7.4	27.6	1726	-726
Vermont	11.8	0.7	22.5	1341	-341
Virginia	13.9	Not Reported	29.7	2343	-1343
Washington	11.8	5.3	Not Reported	1495	-495
West Virginia	17.2	Not Reported	49.8	2714	-1714
Wisconsin	13.7	2.3	25.0	1196	-196
Wyoming	13.0	2.0	28.1	1432	-432
Nationwide	**12.4**	**7.4**	**37.7**	**2052**[5]	----

[5] Thomas reported a nationwide mean ratio of 1816; however, this figure appears to be either a miscalculation or a misprint. The 2052 figure was derived after taking into account the varying student populations, and number of psychologists employed, in the different states (i.e., states were not treated as equal units).